

On page 1, please replace the first paragraph with the following rewritten paragraph:

A2
INS
B2 The invention relates to a method of detecting a welding voltage, as outlined in claim 13.

On page 1, last paragraph to page 2, line 4, please replace with the following rewritten paragraph:

A3
INS
B3 This objective is achieved by the invention due to the features set out in the characterising part of claim 13. The advantage of this arrangement is that the interference variables can be detected without the need for additional hardware, thereby avoiding any external influences. Another advantage resides in the fact that the calculation method used to determine the interference variables can be run continuously or periodically, which means that in the case of a pulse welding process, a control can be applied during the entire duration of the pulse, making it possible to use or generate very short pulses without having to extract a corresponding range that is not controllable, as is necessary with the prior art.

On page 2, second complete paragraph to the seventh paragraph, please replace with the following rewritten paragraphs:

Also of advantage are the features defined in claim 14 which produce a very high welding quality because the interference variables can be taken into account in the process control.

Claim 15 also defines features which are of advantage, since they make it possible to adapt to the control speed or to the requisite welding quality so that welding processes can be run at a very high control rate and to a high welding quality.

The additional features set out in claim 16 are of advantage because they obviate the need for an additional control device for the detection or calculation process and instead this calculation can be operated by the control device used to regulate the process.

Claim 17 offers advantageous features because a standardised structure can be used for the equipment.

The additional features defined in claims 18 to 20 offer advantages because they allow a simple computation model to be used to determine the ohmic resistance and inductance.

Claims 21 and 22 specify advantageous features, as a result of which a computation of the interference variables can also be run during a welding process without having to interrupt the welding process.